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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/052,678

01/18/2002

James W. Moore

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06/28/2004

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EXAMINER

TRAIL, ALLYSON NEEL

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/052,678	MOORE ET AL.	
	Examiner	Art Unit	
	Allyson N Trail	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-28 and 46-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-25, 46, 51-54 and 59-61 is/are rejected.
- 7) ☒ Claim(s) 26-28, 47-50, and 55-58 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/18/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment

1. Receipt is acknowledged of the Amendment filed April 19, 2004.

Remarks

2. The indicated allowability of claims 18-28 from previous Office Action (mailed March 2, 2004) is withdrawn in view of recognition that Bjorner et al (6,236,735) teaches the subject matter of claims 18, 25, 46, and 54, Bjorner et al in combination with Moed and Gerety et al teach the subject matter of claims 19-24, 51-53 and 59-61. The delay in citation of the above art is regretted.

Rejections based on the above identified prior art follows. **Therefore, this action is not made Final.**

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 18, 25, 46, and 54 are rejected under 35 U.S.C. 102(e) as being anticipated by Bjorner et al (6,236,735).
5. Bjorner et al teaches the following in regards to claims 18, 46, and 54:

As shown in figures 1 and 4, multiple images are captured of at least a portion of a surface of the component in response to a trigger signal. The multiple images are captured by a low resolution CCD camera and a high resolution CCD camera. The multiple images comprise a series of images including a first image and at least one subsequent image of a mark and readable indicia (claim 1). The belt encoder 26, also shown in figures 1 and 4 indicates to the low resolution CCD camera the speed of the conveyor belt and therefor the low resolution CCD camera receives a trigger signal depending on the belt encoder. The image from the low resolution CCD camera is stored in the host computer (figure 4). The high resolution CCD camera captures the second image for the purpose of identifying and reading, and is also connected to the host computer.

Bjorner et al teaches the following in regards to claim 25:

As discussed two cameras are used to capture multiple images.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjorner et al (6,236,735) in view of Moed et al (5,770,841).

Bjorner et al's teachings are discussed above. Bjorner et al also teaches the defined duration of the user-specified delay equaling zero by the fact that the conveyor belt moves at a constant speed. Also, being a constant speed, the duration of each user-specified interval is identical. (This is in regards to claims 20, 22, and 23).

Bjorner et al fails to teach the following: a user-specified delay prior to capturing the first image and having a defined duration and the defined duration of the user-specified interval corresponding to each successive image in the series of images being identical.

Moed et al teaches the following in regards to claims 19 and 21:

"The packages are separated by a device known as a singulator. A suitable singulator is described in U.S. Pat. No. 5,372,238 to Bonnet, entitled 'Method and Apparatus for Singularizing Objects.'" (Col. 6, lines 16-19).

"The conveyor belt 18 includes a belt encoder 44 that is used to determine the speed and position the associated conveyor belt." (Col. 6, lines 20-22). Singulators separate packages and delay each package for reading until the preceding package has been read.

Moed et al teaches the following in regards to claim 24:

The singulators separate packages and delay each package for reading until the preceding package has been read. Depending on the time it takes to read a package, the user-specified interval is varied and distinct.

In view of Moed et al's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ the

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display and the user-specified intervals taught by Moed et al to the teachings of Bjorner et al. One would be motivated to do so in order to eliminate the problem of packages traveling along a conveyor belt too quickly and not being able to be clearly decoded. Both the display and the user-specified intervals help to avoid this problem.

8. Claims 51-53 and 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjorner et al (6,236,735) in view of Gerety et al (6,560,741).

Bjorner et al's teachings are discussed above.

Bjorner et al fails to teach the following: a single image sensor configured to capture multiple images, a display, and that the image sensor is a metal oxide semiconductor image sensor.

Gerety et al teaches the following in regards to claims 51 and 59:

"Yet another technique known in the art suitable for capturing a two-dimensional image of a two-dimensional printed code comprises capturing multiple images of the two-dimensional image of a two-dimensional printed code using a two-dimensional image sensor, wherein each of the images thus captured represents only a portion of the two-dimensional printed code, and "stitching" the multiple images together into a single image representative of the entire two-dimensional printed code. This can be accomplished by sweeping the two-dimensional printed code past a two-dimensional image sensor incapable of capturing the entire two-dimensional printed code in a single image. Multiple overlapping "snapshot" images are captured via the two-dimensional image sensor as the two-dimensional printed code is swept by. The image-to-image

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overlap (boundary correlation) is analyzed in software and the images of "fused" to produce a single, coherent image. This technique has been employed previously with "hand scanner" devices such as the "Logitech ScanMan." (Col. 12, line 66 – Col. 13, line 17).

Gerety et al teaches the following in regards to claims 52 and 60:

"The display device 430 is a full-color active-matrix display capable of displaying a color photographic image. In other embodiments, however, a monochrome display, text-only display, or simple indicators may be substituted depending upon application-specific display requirements." (Col. 13, lines 41-45).

Gerety et al teaches the following in regards to claims 53 and 61:

"The means for capturing the image of the two-dimensional, high density, damage tolerant code can comprise, for example, a two-dimensional charge-coupled-device (CCD) image sensor, two-dimensional CMOS image sensor or other suitable two-dimensional imaging device focused on the surface of a substrate bearing the two-dimensional printed code. Alternatively, linear sensor such as a linear CCD, linear CMOS image sensor, linear contact image sensor (CIS) or other suitable linear image sensor device can be focused on a substrate to capture a two-dimensional printed code and "swept" across the surface substrate to capture a two-dimensional image thereof." (Col. 12, lines 50-61).

In view of Gerety et al's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ the single image sensor able to capture multiple images, store each image and

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process the stored images in order to read the code on the article to the teachings of Bjorner et al. Bjorner et al's teachings include processing a trigger signal in response to a location of a component in an automated identification system. Both Bjorner et al and Gerety et al teach capturing multiple images of indicia, however Bjorner et al uses two image sensors to accomplish this. One would be motivated to use Gerety et al's single image sensor to capture multiple images in order to eliminate additional equipment that may break and that may cost more.

Allowable Subject Matter

9. Claims 26-28, 47-50, and 55-58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's for allowance: Although Bjorner et al and Moed et al in combination teach method of capturing multiple images of packages moving along a conveyer belt, the above identified prior art of record, taken alone, or in combination with any other prior art, fails to teach or fairly suggest the specific features of the present claimed invention, such instructions to switch from one source to another source in response to an occurrence of user-specified criteria. Additionally, prior art fails to teach where capturing at least one of the multiple images via the external camera includes configuring the image system to receive an input from an external camera via switching to the external camera in response to user-specified criteria. Moreover, one of ordinary skill in the art would not have been motivated to come to the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Dwinell et al (6,267,293), Smith et al (5,880,451), and Gurevich et al (2002/0148900).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Allyson N. Trail* whose telephone number is (571) 272-2406. The examiner can normally be reached between the hours of 7:30AM to 4:00PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (571) 272-2398. The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [allyson.trail@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the

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confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Allyson N. Trail
Patent Examiner
Art Unit 2876
June 23, 2004

Jared J. Fureman
JARED J. FUREMAN
PRIMARY EXAMINER